

## **INTERNATIONAL SEARCH REPORT**

International Application No  
PCT/ [REDACTED] 3/10937

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C10G27/12 C10G67/12

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
**IPC 7 C10G B01J**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

**Electronic data base consulted during the International search (name of data base and, where practical, search terms used)**

EPO-Internal

### **C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02 053683 A (CARRIAT JEAN-YVES ;TOTAL RAFFINAGE DISTRIB'S A (FR); BISSON MARC ()) 11 July 2002 (2002-07-11)	1,3,5,6, 8,9,11, 12, 17-28, 32,33
Y	claims 1-12; examples 1,2 ---	29
Y	WO 01 48119 A (BERNARD JEAN RENE ;FAJULA FRANCOIS (FR); RABION ALAIN (FR); ELF AN) 5 July 2001 (2001-07-05) cited in the application page 5, line 23 - line 35 ---	29
X	US 5 049 536 A (BELLUSSI GIUSEPPE ET AL) 17 September 1991 (1991-09-17) cited in the application column 3, line 20 - line 47 ---	31

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search

Date of mailing of the International search report

28 January 2004

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/03/10937

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 852 088 A (BRADLEY JOHN-STEWART ET AL) 22 December 1998 (1998-12-22) claims 1,14,17; examples 22-24,32,33,35	32,33,37
A		36
X	EP 0 492 697 A (SNAM PROGETTI ;ENIRICERCHE SPA (IT)) 1 July 1992 (1992-07-01) cited in the application claim 1	32,37
X	US 6 323 147 B1 (TSUJI JUNPEI ET AL) 27 November 2001 (2001-11-27) column 4, paragraph 9; claim 1; example 1 column 4, last paragraph -column 5, last paragraph	33-35, 38-48

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/EP03/10937

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
WO 02053683	A 11-07-2002	FR EP WO	2818990 A1 1346009 A1 02053683 A1	05-07-2002 24-09-2003 11-07-2002
WO 0148119	A 05-07-2001	FR EP WO JP US	2802939 A1 1246889 A1 0148119 A1 2003518548 T 2003102252 A1	29-06-2001 09-10-2002 05-07-2001 10-06-2003 05-06-2003
US 5049536	A 17-09-1991	IT AT BR CA DE DK EP ES GR JP JP KR MX SU	1219692 B 72414 T 8902503 A 1334964 C 68900807 D1 220889 A 0340868 A1 2030966 T3 3004136 T3 1320214 A 2779450 B2 9105192 B1 169950 B 1837958 A3	24-05-1990 15-02-1992 23-01-1990 28-03-1995 19-03-1992 07-11-1989 08-11-1989 16-11-1992 31-03-1993 26-12-1989 23-07-1998 23-07-1991 02-08-1993 30-08-1993
US 5852088	A 22-12-1998	CA EP JP WO	2239082 A1 0869931 A1 2000502657 T 9724296 A1	10-07-1997 14-10-1998 07-03-2000 10-07-1997
EP 0492697	A 01-07-1992	IT AT DE DE DK EP ES JP US US	1244478 B 103841 T 69101628 D1 69101628 T2 492697 T3 0492697 A1 2052329 T3 4354539 A 5434118 A 5578744 A	15-07-1994 15-04-1994 11-05-1994 01-09-1994 18-07-1994 01-07-1992 01-07-1994 08-12-1992 18-07-1995 26-11-1996
US 6323147	B1 27-11-2001	JP JP CN CN ES ES JP JP KR NL NL NL NL SG SG US US	2000107604 A 2000107605 A 1247101 A 1248579 A 2166271 A1 2165773 A1 2000109469 A 2000109470 A 2000017002 A 1012748 C2 1012748 A1 1012749 C2 1012749 A1 82626 A1 73663 A1 6096910 A 2002037807 A1	18-04-2000 18-04-2000 15-03-2000 29-03-2000 01-04-2002 16-03-2002 18-04-2000 18-04-2000 25-03-2000 06-06-2000 08-02-2000 06-06-2000 08-02-2000 21-08-2001 20-06-2000 01-08-2000 28-03-2002